TANDY®

TRS-80 Model 4

Double Duty

Cat. No. 26-2021

TANDY
MODEL 4

Double Duty

CONTENTS

1. INTRODUCTION

Why Is DoubleDuty Unique?

DoubleDuty enables you to load two programs into your Model 4 at the same time. You can move back and forth between the two programs without reloading, and you can execute any TRSDOS® Library command without storing the text or data you are working on.

To use the DoubleDuty program, you need a TRS-80® Model 4 with 128K. Since most Model 4 programs require no more than 64K, DoubleDuty takes advantage of your system's increased memory capacity. Because Double-Duty takes up almost no memory itself, it is able to more than double the system's operating potential.

How Does DoubleDuty Work?

DoubleDuty divides your computer's 128K memory into three complete and independent parts, called *partitions*. Partitions 1 and 2 each operate like a 64K Model 4. On each, you can load and execute any Model 4 program designed to run on a 64K system. (You can also run BASIC or TRSDOS commands in either partition.) In addition, you can use Partition 3 to execute TRSDOS Library commands (such as COPY, DIR, and REMOVE).

64K   **64K**
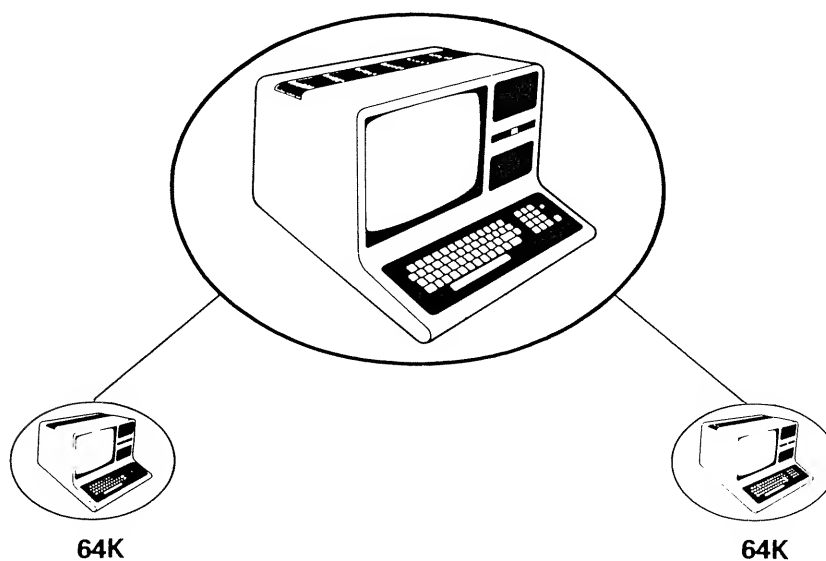
Imagine sitting at a table with the two Model 4 computers in front of you. On the first 64K Model 4, you have loaded the SuperSCRIPSIT (26-1595) word processing program. On the second 64K Model 4, you have loaded PFS: FILE (26-1518). While typing a document on the first Model 4, you discover that you need a piece of information stored in the FILE program. You turn to the second Model 4 and find the information you need. Then you turn back to the first Model 4 to continue typing the document.

But then you realize that you have forgotten the name of a document stored on a data diskette, and you need the name. So now you call up the Directory for the data diskette on the second Model 4. In all of this, you have been able to enter a second program, to display a Directory, and to return to the first program without disturbing the document you are typing.

You are typing a SuperSCRIPSIT document	You enter PFS: FILE	You display a Disk Directory
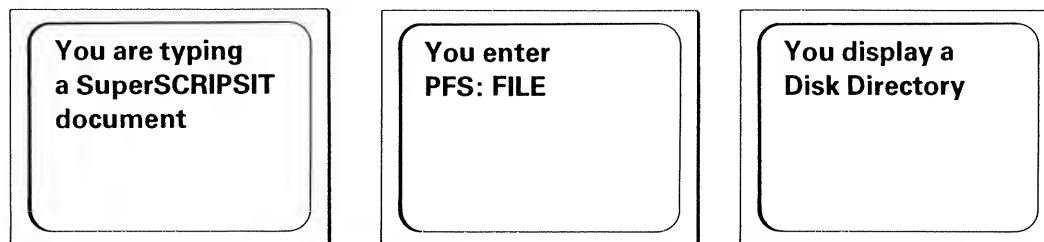
That's how DoubleDuty works. It puts two computers and a little more into one 128K Model 4. In addition, for all three partitions you can use the same printer, disk drives, and other peripherals.

Program Requirements

To use DoubleDuty, you must have a TRS-80 Model 4 128K computer with at least one disk drive (although many Model 4 programs require two disk drives). The DoubleDuty program will work with most Model 4 programs designed to operate under TRSDOS Version 6, as long as the program can fit on a 64K Model 4. (You cannot use Model III programs unless they have been converted to run on Model 4 TRSDOS Version 6.)

Both programs you want to use must be on disks which have the same version of the disk operating system. To verify the version of the operating system, boot your diskettes and compare the version number of the operating systems prior to running DoubleDuty. If one program is using a newer version of TRSDOS Version 6 (for example, 06.02.00), then you can convert the older program to the newer

6

operating system. (Refer to your *Disk System Owner's Manual* for information about converting.)

If you choose to use programs with different versions of the disk operating system, *always* make sure that the disk in Drive 0 has the version of the disk operating system you used when you booted the system.

2. STARTING UP

To Install Your Model 4

If you have not yet installed your computer, read the section dealing with in-stallation in your *Model 4 Disk System Owner's Manual*. If you will be using a printer, read the owner's manual that came with it in order to ensure that you properly connect it.

To Start Up Your Model 4

1. **Turn on all peripherals (such as the printer) and then switch on your Model 4.** The bottom disk drive light comes on to indicate that the drive is running.

2. **Open the disk drive door on Drive 0 (the bottom drive) and insert a TRSDOS diskette into Drive 0 (or your program diskette).**

3. **Close the drive door.**

4. **Press the RESET button on your computer.** After loading the oper-ating system, the TRSDOS copyright and the date prompt appear on the screen.

5. **Enter the date, using the format MM/DD/YY and press** ENTER . The day and date are displayed.

The prompt TRSDOS Ready appears on the screen. Now you are ready to load DoubleDuty.

To Load DoubleDuty on a Model 4 With Two Drives

You have started up the Model 4 with a program diskette and TRSDOS Ready is on the screen.

1. **Insert the DoubleDuty diskette into Drive 1.**

2. **Type** D D U T Y **in upper or lower case letters.**

3. **Press** ENTER .

The light on Drive 0 comes on to indicate that the DoubleDuty program is being loaded into the Model 4 memory.

Once you have pressed ⌈ **ENTER** ⌉, you cannot stop the loading operation by pressing ⌈ **BREAK** ⌉. The system will ignore the Break key until the program has been fully loaded.

When the program has been loaded, it displays the Partition 1 TRSDOS Ready prompt. DoubleDuty is now ready ("operational"), and you can load the first Model 4 program. Remove the DoubleDuty diskette and store it in a safe place.

DoubleDuty -- Partition 1

Note: High memory reserved for partition three (system).

DoubleDuty is now operational.

TRSDOS Ready

--

To Load DoubleDuty on a Model 4 With One Drive

You have started up the Model 4 with a program diskette and TRSDOS Ready is on the screen.

1. Type ⌊R⌋⌊U⌋⌊N⌋ ⌊(⌋⌊x⌋⌊)⌋ ⌊D⌋⌊D⌋⌊U⌋⌊T⌋⌊Y⌋.

2. Press ⌈ **ENTER** ⌉. You will be prompted

     Insert SOURCE disk <ENTER>

3. Insert the DoubleDuty diskette into the drive.

4. Press ⌈ **ENTER** ⌉. The light on the drive will come on and you will be prompted

     Insert SYSTEM disk <ENTER>

5. Remove the DoubleDuty diskette and insert a diskette with TRSDOS.

6. Press ⌈ **ENTER** ⌉.

The light on the drive comes on to indicate that the DoubleDuty program is being loaded into the Model 4 memory.

Once you have pressed [**ENTER**], you cannot stop the loading operation by pressing [**BREAK**]. The system will ignore the Break key until the program has been fully loaded.

When the program has been loaded, it displays the Partition 1 TRSDOS Ready prompt. DoubleDuty is now ready ("operational"), and you can load the first Model 4 program. Remove the DoubleDuty diskette and store it in a safe place.

DoubleDuty -- Partition 1

Note: High memory reserved for partition three (system).

DoubleDuty is now operational.

TRSDOS READY

—

Installation Messages

The first message on the screen describes the status of the *system partition* (Partition 3). Where in the memory the program stores Partition 3 depends on how much memory is available. In the example above, you see the message Note: High memory reserved for partition three (system). This means that Partition 3 is available for use.

11

3. LOADING PROGRAMS

After you have loaded DoubleDuty, the program displays the Partition 1 TRSDOS Ready prompt.

To Load the First Program

1. **Insert the program diskette into Drive 0. Load the program as you normally would. Type the program name.**

    For example, to load the SuperSCRIPSIT program, type $\boxed{S}\boxed{C}\boxed{R}\boxed{I}\boxed{P}$ $\boxed{S}\boxed{I}\boxed{T}$.

2. **Press** $\boxed{\text{ENTER}}$.

The system loads the program as usual and displays the program's normal main menu or start-up screen. Now you can operate the program as you normally would.

DoubleDuty scans both disk drives when you load a program into either partition. Therefore, once you have loaded DoubleDuty, you can insert diskettes into either drive.

Do not attempt to move between partitions ($\boxed{\text{CAPS}}$ and $\boxed{\text{F1}}$, $\boxed{\text{F2}}$, or $\boxed{\text{F3}}$) when you are loading a program. After the system has completed loading the program and displayed the program's normal menu or start-up screen, you can move between partitions.

Reset

Note that the system loads some programs automatically when you press $\boxed{\text{RESET}}$. For example, for the PFS: FILE program, the *User's Manual* tells you to press $\boxed{\text{RESET}}$ to load the program. **Do not press** $\boxed{\text{RESET}}$. Instead, use the program name. Each program has a code name (usually the program name) that you must enter in response to the TRSDOS Ready prompt. In this example, you would type $\boxed{F}\boxed{I}\boxed{L}\boxed{E}$ and press $\boxed{\text{ENTER}}$. If you press $\boxed{\text{RESET}}$, you will have to reload the DoubleDuty program.

To clear the program in memory and to return to the TRSDOS Ready prompt, use the DoubleDuty Reset sequence.

13

To Load the Second Program

1. **Display the** TRSDOS Ready **prompt for Partition 2. Hold down** $\boxed{\text{CAPS}}$ **and press** $\boxed{\text{F2}}$.

   You see the TRSDOS Ready prompt.

2. **Insert the program diskette into Drive 0.**

   If the first program diskette is in Drive 0, you can insert the second program diskette into Drive 1.

3. **Type the program name or code name.**

   For example, to load FORMATION, type $\boxed{\text{F}}\boxed{\text{O}}\boxed{\text{R}}\boxed{\text{M}}$.

4. **Press** $\boxed{\text{ENTER}}$.

   The system loads the second program and displays the program's normal main menu or start-up screen. Now you can operate the program as you normally would.

Note that when you press $\boxed{\text{CAPS}}$ and a function key, the program *will not* change the case of the characters. For example, if you are typing in lower case before you enter the Reset sequence, then the program will continue in lower case after the command.

Using Communications With DoubleDuty

You should use a communications program with DoubleDuty only to perform offline editing. If the program is online and the partition executing the program is swapped out, the program will no longer transmit nor receive data. This may result in the loss of data or a disconnect condition. Most host computer systems require a continuous CARRIER DETECT which will be maintained even when the partition is swapped out. If the host computer system does not hang up, you will be charged connect time even while the program is swapped out and you are running a program in another partition.

14

4. MOVING BETWEEN PARTITIONS

The Commands

You can work with either the program in Partition 1 or in Partition 2. In addition, you can use Partition 3 to execute a TRSDOS Library command. You cannot transfer data from one partition to another. You use the keys [F1], [F2], [F3] to move to Partitions 1, 2, or 3.

To move to Partition 1, hold down [CAPS] and press [F1].

To move to Partition 2, hold down [CAPS] and press [F2].

To move to Partition 3, hold down [CAPS] and press [F3].

Although you can work in only one partition at a time, the system suspends the program in one partition each time you move to a different partition. When you return to the previous partition, the screen is exactly as you left it.

The system will "beep" if you try to move to the partition that you are already in or if you attempt to move to Partition 3 (the system partition) and it is not available.

An Important Note About Swapping

Moving between partitions is called *swapping*. Whenever you swap partitions, TRSDOS requires you to have a diskette containing the operating system (for example, any program diskette) in Drive 0.

The light on Drive 0 may come on while the program loads part of the operating system. If it finds no diskette, the light will remain on for a time and the disk drive will continue to rotate until you insert a program diskette. If the light on Drive 0 goes out, insert a diskette containing the TRSDOS operating system into Drive 0 and hold down [SHIFT] and press [BREAK].

Before swapping partitions, therefore, always be sure that there is a program diskette in Drive 0. The diskette should be the diskette for the program you are moving to.

Finally, and most important, when changing diskettes in Drive 0, be certain that the operating system version of the new diskette is the same as the one you are removing. For example, if you "boot" the system with TRSDOS Version 06.01.00, never insert a copy of TRSDOS Version 06.02.00 into Drive 0.

5. WORKING WITH PARTITIONS 1 AND 2

Separate Computers

As you work with a program, you should remember that each partition operates like a separate computer. For example, if you would normally insert a program diskette into Drive 0 and a data diskette into Drive 1, then you should continue to follow that procedure. Each time you move to another partition, you must first make sure that you have inserted the correct diskettes. Otherwise, you may try to execute a command with the wrong program diskette or store data on the wrong data diskette.

Some programs allow you to remove the program diskette after you load the program. If the instructions for a program tell you to load the program and then to remove the diskette, do so. That program will remain in the system's memory until you exit the program or use the DoubleDuty Reset sequence. However, with some programs, you must keep the program diskette in one of the disk drives in order to execute program commands. This is the case, for example, with the SCRIPSIT and FORMATION programs.

You can insert the program diskettes into either drive; but remember, you must insert a program diskette into Drive 0 when you swap partitions.

Drive 1:
Data diskette or
second program diskette

Drive 0:
program diskette
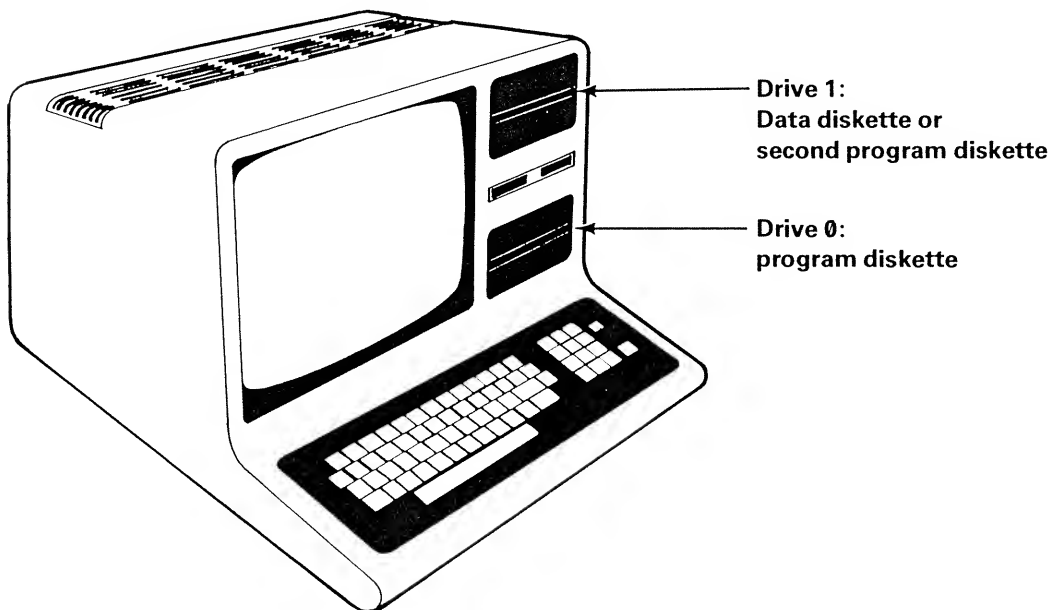
Several Programs on One Diskette

You can copy other programs onto a program diskette. Then you can load two programs from the same diskette. In this way, you do not have to change program diskettes to load them. In fact, you can copy *all* the programs you plan to use with DoubleDuty onto one program diskette. Then you don't have to change diskettes for any program you want to load. (For more information on the Copy command, see your *Model 4 Disk System Owner's Manual.)*

6. WORKING WITH PARTITION 3

If you want to execute a TRSDOS Library command without affecting either of the programs in the first two partitions, you use Partition 3. Make sure that the diskette in Drive 0 contains a version of the TRSDOS operating system.

1. **Hold down** CAPS **and press** F3 **to display the** TRSDOS Ready **prompt for Partition 3.**

2. **Type the command name and press** ENTER **.**

   For a list of the available TRSDOS Library commands, display the Partition 3 TRSDOS Ready prompt. Then type L I B and press ENTER .

Library <A>

Append	Copy	Device	Dir	Do	Filter	Lib
Link	List	Load	Memory	Remove	Rename	Reset
Route	Run	Set				

Library <B>

Attrib	Auto	Build	Create	Date	Debug	Dump
Free	Purge	Time	Verify			

Library <C>

Forms	Setcom	Setki	Spool	Sysgen	System

You can execute the following TRSDOS Library commands in Partition 3 at any time:

Append	Dir	Purge
Attrib	Do	Remove
Auto	Dump	Rename
Copy	Forms	Reset
Create	Free	System
Date	Lib	Time
Debug	List	Verify
Device		

19

You can execute the following TRSDOS Library commands in Partition 3 provided the command does not attempt to alter HIGH$. (For information about HIGH$, refer to the Model 4 *Technical Reference Manual.*)

Build	Memory	Setcom
Filter	Route	Setki
Link	Run	Spool
Load	Set	

Do not attempt to execute the SYSGEN command when DoubleDuty is active. If you want to load DoubleDuty automatically, activate it with the AUTO command or in a DO file. (For information about the AUTO command or the DO File, see your *Model 4 Disk System Owner's Manual.*)

You cannot execute a non-TRSDOS Library command in Partition 3. For example, you cannot format or backup a diskette in Partition 3.

7. DOUBLEDUTY CHECKLIST

Using Disk Drives

Because you can only access a disk drive for one program at a time, you should not try to move to a different partition while the disk drive light is on.

Format and Backup

If you want to format or backup a diskette, follow the same procedure you normally would. Display the TRSDOS Ready prompt in either Partition 1 or 2. (You may have to exit a program.) Insert a TRSDOS program diskette into Drive 0 and a data diskette into Drive 1. Enter the Format or Backup command. *Do not try to swap partitions during the format or backup operation.* (For more information, refer to the *Model 4 Disk System Owner's Manual.*)

Using a Printer

Do not try to print with both programs at the same time. While the printer is operating, you should not try to move to a different partition. You *can,* however, move to a different partition while the printer is idle.

If you have spooled the data you want to print into a print buffer, you can then move to a different partition while the printer is operating.

Working With Cassettes

Do not try to use a cassette tape with two programs at the same time. You must complete the load or save operation for one program before you try to use the cassette with the other program.

Drivers, VERIFY, DEBUG, and TRSDOS System Commands

You can load Drivers, VERIFY, DEBUG, or any TRSDOS System command parameters before or after you load DoubleDuty. (There is one exception, communication drivers. Communication drivers should always be loaded *after* DoubleDuty.) If you load drivers before loading DoubleDuty, they are

effective for all three partitions. If you load them after you have loaded DoubleDuty, you can use them only in the partition that was active at the time you activated them. (For more information about drivers, VERIFY command, DEBUG command, and the TRSDOS System commands, refer to your *Model 4 Disk System Owner's Manual.*)

SYSGEN

Do not attempt to execute the SYSGEN command when DoubleDuty is active. If you want to load DoubleDuty automatically, activate it with the AUTO command or in a DO File. (For information about the AUTO command or the DO File, see your *Model 4 Disk System Owner's Manual.*)

Opening Files

You cannot work with the same file in more than one partition at a time. (For more information about files, see your *Model 4 Disk System Owner's Manual.*)

DO Commands

You cannot have DO commands active in more than one partition at a time.

JOB LOG

If you wish to maintain a single Job Log containing information relating to all of the partitions, activate the *JL device **before** loading DoubleDuty. DoubleDuty will post a message in the log each time you swap or reset partitions. You can then route the log to the screen or printer as normal. (For more information about Job Logs, refer to your *Model 4 Disk System Owner's Manual.*)

Graphics

DoubleDuty will not access a graphics card. Therefore, you cannot perform graphics operations while DoubleDuty is loaded.

8. ENDING A SESSION

To Exit a Program

With each program, you must follow a specific procedure for exiting (also known as *quitting*) the program. When you are finished working with a program, follow the instructions supplied with the program in order to return the system to the TRSDOS Ready prompt. Note that this prompt is only for the partition you are working in. After you have returned to TRSDOS Ready, you can move to another partition and continue working, or you can exit that program also.

RESET

Never press the RESET button when DoubleDuty has been loaded. If you do, you will have to start over by reloading DoubleDuty and any programs that you have loaded into Partitions 1 and 2. Rather than pressing ⎡ **RESET** ⎤, use the DoubleDuty Reset sequence to clear the partition you are in.

Reset Sequence

The DoubleDuty Reset sequence should only be used to terminate a program which is normally terminated by pressing ⎡ **RESET** ⎤. The DoubleDuty Reset sequence does not terminate DoubleDuty. It terminates the program loaded in a partition.

The DoubleDuty Reset sequence works similar to the TRS-80 ⎡ **RESET** ⎤ key. For example, with TRSDOS, if a file is open when you press ⎡ **RESET** ⎤, it will remain open when you reload the program. The same situation will exist with the DoubleDuty Reset sequence.

1. **Hold down** ⎡ **CAPS** ⎤ **and** ⎡ **CLEAR** ⎤ **at the same time.**

2. **Without releasing** ⎡ **CAPS** ⎤ **and** ⎡ **CLEAR** ⎤**, press** ⎡ **F1** ⎤**,** ⎡ **F2** ⎤**, or** ⎡ **F3** ⎤**.**
    You press the key that corresponds to the partition you are in. For example, if you are in Partition 2, you press ⎡ **F2** ⎤.

This will return the screen to the TRSDOS Ready prompt. If you enter this sequence while you are in a different partition, you will hear a "beep." For example, you will hear the "beep," if you are in Partition 1 and you press ⎡ **CAPS** ⎤⎡ **CLEAR** ⎤⎡ **F2** ⎤.

23

When you use the Reset sequence
DoubleDuty *will:*

1. Terminate *whatever* is running in the current partition.

2. Clear the display and return it to the 80 character width, and disable reverse video.

3. Remove any scroll protection.

4. Restore the cursor to the standard TRSDOS underline.

5. Clear all keystrokes from the type-ahead buffer.

6. Issue a message to the Job Log; for example,

> DoubleDuty -- Partition 1 RESET.

7. Issue the TRSDOS Ready prompt on the top line.

DoubleDuty *will not:*

1. Alter any device drivers, filters, or links.

2. Alter system flags which have been set.

DoubleDuty allows you to abort a partition which is already at TRSDOS Ready. This allows you to remove scroll protection and/or restore the cursor to the standard TRSDOS underline.

Note that when you press ⎣ **CAPS** ⎤ and a function key, the program *will not* change the case of the characters. For example, if you are typing in lower case before you enter the Reset sequence, then the program will continue in lower case after the command.

To Turn Off the Model 4

1. **Exit each program as you normally would.**

2. **Carefully remove the diskettes from the drives.**

3. **Turn off the peripherals.**

4. **Turn off the Model 4.**

9. TECHNICAL NOTES

To find additional information about any of the topics discussed in this section, refer to the Model 4 *Technical Reference Manual*.

System Memory

DoubleDuty is installed in Memory Banks 1 and 2. However, a small driver is loaded in low memory unless numerous I/O drivers, filters, etc., have been added to the resident system. Even if these I/O drivers have been installed and you receive the message Note: - - - - installed in high memory from the drivers, there is usually enough room available for the installation of the DoubleDuty driver in low memory.

Partitions 1 and 2 are always available. The third partition requires high memory. However, this requirement is masked by any I/O drivers that you have loaded into high memory. This, in effect, gives the impression that the third partition occupies no memory at all. Actually, Partition 3 will shadow all high memory routines in Phantom-RAM.

If Partition 3 is forced (the default) and HIGH$ is already at or below X'F400' because of the presence of system routines in high memory, it requires no additional memory.

However, if there are no system routines in high memory (HIGH$ is equal to X'FFFF'), HIGH$ will be lowered to approximately X'FA00'. If HIGH$ is between X'F400' and X'FFFF', HIGH$ will be lowered to a point between its current position and X'F400'.

In order for DoubleDuty to work, you must have all memory banks available. If any banks are unavailable, you cannot load DoubleDuty properly and you will receive an error message.

Model 4 Programs

Each of the two programs that you load may use up to the maximum amount of memory that would be available on a 64K system with the same configuration of drivers, filters, interrupt routines, and so forth.

Any attempt to reserve a memory bank (@BANK) will result in a failure exit condition, since the bank is already in use.

To Load DoubleDuty With the Memory Option

You use the Memory option to load the DoubleDuty program without reserving space in memory for the third partition. In this way, DoubleDuty ensures that all available memory is reserved for loading programs in the first two partitions.

1. **Start up the Model 4 and display the** TRSDOS Ready **prompt.**

2. **Type** D D U T Y ⬚ (M E M O R Y) or D D U T Y ⬚ (M).

3. **Press** ENTER.

When the first partition screen appears, you see the message Note: Partition three (system) currently locked out.

Files

You may open a file for only one program at a time, unless at least one of the programs opens a file for read only (via SFLAG$ of @FLAGS SVC). (See *To Lock Partitions*, below.)

DO

You may activate two different DO files simultaneously, if one of the files is executed without being compiled using DO =___. (For more information about the DO File, refer to your *Model 4 Disk System Owner's Manual.)*

To Lock Partitions

DoubleDuty permits the advanced programmer to incorporate record locking. You can lock a partition in memory by setting the partition lock. If you set the partition lock before you load DoubleDuty, DoubleDuty will interpret this as an indication that the system is locked for the exclusive use of the loaded program. Finish that job (or re-boot) and then load DoubleDuty.

The partition lock is provided for use in new programs where one procedure cannot be interrupted by another. One partition may open the file as "read-only" by using bit 0 of 'SFLAG$,' while another program, doing updates in

26

the other partition, would open the file for read/write (normal @OPEN request). An example is a file which is opened by both partitions and needs to have record locking during file updates (read/modify/write).

This procedure enables the program in the partition which opened the file for Read/Write to:

1. Set the partition "lock."
2. Read in the record(s) you want to modify.
3. Modify the records.
4. Write the records back to the disk.
5. Reset the partition "lock."

In other words, the lock should be treated in much the same manner as when disabling/enabling interrupts.

Drivers

All device drivers (via Set, Filter, Link, or Route to disk) established prior to activating DoubleDuty will be common to all partitions.

Since a driver is configurable at load time, all device drivers that you load after you activate DoubleDuty will be loaded a second time with the new configuration.

Drivers established by either partition will be known only within that partition. For example, Partition 1 may have the *PR device attached to a printer, while the *PR device for Partition 2 is ROUTED to a disk file. However, all drivers established by either partition will continue to occupy system driver memory or high memory (above HIGH$), no matter what partition you are using.

Any hardware driver which is attached to a hardware interrupt vector and/ or accepts a wakeup vector (via @CTL) must be loaded *after* DoubleDuty.

HIGH$

Anything that lowers HIGH$ will remain resident for both partitions. It will therefore lower HIGH$ for both partitions. Due to the partition swapping involved, a module placed above HIGH$ by one partition will lower HIGH$ for both partitions. If either partition sets the HIGH$ lock (bit 0 of SFLAG$), then neither partition may load additional modules into high memory until the HIGH$ lock is cleared by the partition which set it.

27

PFLAG$

A new system flag has been added called PFLAG$. (For information on system flags, refer to @FLAGS in the *Model 4 Technical Reference Manual.)*

IY-99 = PFLAG$ (Partition Flag)

        bit 7 – DoubleDuty is active
        bit 6 – partition lock
        bit 5 – current partition number (bit 1)
        bit 4 – current partition number (bit 0)
        bit 3 – used by DoubleDuty
        bit 2 – used by DoubleDuty
        bit 1 – used by DoubleDuty
        bit 0 – used by DoubleDuty

Note: You can alter bit 6.

10. MESSAGES

Unable to install DoubleDuty, insufficient memory (128K required).

- You don't have a 128K system. You cannot use the DoubleDuty program.

Unable to install DoubleDuty, memory bank reserved or non-existent.

- The computer does not have 128K, or you have activated a program that is using Memory Banks 1 and/or 2 (such as MEMDISK or SPOOL).

Unable to install DoubleDuty, too many I/O drivers in low memory.

- You have activated too many I/O drivers before trying to load DoubleDuty. Remove some of the drivers and reload DoubleDuty. You can load the remaining drivers after you load DoubleDuty.

Note: DoubleDuty partially installed in high memory.

- This is an informative message telling you that the DoubleDuty driver has been partially stored in High Memory. No action is required.

Note: Partition three (system) available.

- This is an informative message telling you that there is enough memory for you to use Partition 3. Since there was enough memory available, it was not necessary for DoubleDuty to reserve it. No action is required.

Note: High memory reserved for partition three (system).

- This is an informative message telling you that the program has reserved part of high memory so that there is enough room for you to use Partition 3. No action is required.

Note: Partition three (system) currently locked out.

- This is an informative message telling you that you cannot use Partition 3.

  If HIGH$ is sufficiently lowered by loading system modules into high memory or by using the Memory command, Partition 3 will become available.

System Partition -- TRSDOS Library Commands Only

- In Partition 3, you have tried to enter a command that is not included in the TRSDOS Library. Type $\boxed{\text{L}}\boxed{\text{I}}\boxed{\text{B}}$ and press $\boxed{\text{ENTER}}$ to see a list of available commands.

DoubleDuty -- Partition 1 RESET

- You have typed the DoubleDuty Reset sequence for the partition named in the prompt. No action is required. This message appears only in the Job Log.

INDEX

▯Double▯Duty™

DoubleDuty enables you to load and execute two different 64K programs in a single 128K Model 4. You can move instantly from one program to the other without having to reload or store the data currently on the screen. It's like having two separate 64K Model 4 computers sharing the same printer, disk drives, and other peripherals!

It's easy to use! Simply load DoubleDuty – then load each program, one after the other. Now you can display either program on the full screen. And you can switch programs at any time with the touch of a single key.

And that's not all. With DoubleDuty, you can execute TRSDOS Library commands, such as COPY, DIR, and REMOVE, without exiting either program.

DoubleDuty works with most Model 4 applications except programs requiring 128 of memory or communications. Please check minimum system requirements before attempting use.

DoubleDuty requires a Model 4 with 64K RAM upgrade (Cat. No. 26-1122).